Mixing System

FM 750





Function

The "FLOW MIX" kit FM 750, coupled with pump groups GP 1190, allows to install both a the hot water distribution for a traditional system with radiators and the water distribution for a radiant panels system in a single cabinet.

The FM 750 system keeps the water in the radiant panels at a constant, preset temperature by mixing the hot water coming from the boiler with the one recirculating through the bypass circuit.

A thermostatic valve with remote sensor measures the temperature and adds hot water to the circuit accordingly, so as to compensate the heat output of the radiant panels. The "Flow Mix" thermostatic mixer consists of a thermostatic mixing valve and a balancing valve.

By means of a lockshield, the latter regulates the quantity of water returning from the radiant panels circuit to be sent to the low temperature connection of the mixer.

It is advisable to install a safety thermostat on the pump inlet valve, so as to avoid possible damages caused by a sudden temperature rise.

The intervention of the thermostat must block the functioning of the pump. This type of system can supply a maximum thermal power of 20 kW with a Δt of 10°C and a temperature of \geq 70°C on the primary circuit.

Technical data

Max. working pressure:	6 bar
Max. working temperature on primary circuit:	80 °C
Max. working temperature on secondary circuit:	60 °C
Max. differential pressure:	1 bar
Temperature adjustment range:	20 ÷ 60 °C
Temperature stability range:	±3 °C
Working fluids:	water in compliance with UNI 8065:2019

Materials

Thermostatic valve	
Body:	CW 617 N – DW UNI-EN 12165:2016
Obturator:	CW 614 N – DW UNI-EN 12164:2016
Gasket:	Peroxide cured EPDM
Steel parts:	Stainless steel
Cap:	RAL9016 white ABS
Adjustment lockshield	
Body:	CW 617 N – DW UNI-EN 12165:2016
Obturator:	CW 614 N – UNI-EN 12164:2016
Gaskets:	Peroxide cured EPDM
Plug:	RAL9016 white ABS

Accessories

Brass parts:	CW 617 N – DW UNI-EN 12165:2016; CW 614 N – UNI-EN 12164:2016	
Steel parts:	Stainless steel	
Copper parts:	Chrome-plated annealed copper	
Gaskets:	Peroxide cured EPDM	
Safety valve:	Acetal	
Thermostatic head		
Head:	RAL9016 white ABS	
Adjustment range:	20 ÷ 65 °C	
Sensor:	Liquid	
Sensor stroke:	0.105 mm/K	
Length of capillary:	2 m	

Surface treatment

Nickel-plating

Dimensional Drawings

FM 750

Flow mix kit with bypass for mixed heating systems coupled with GP 1190.



Construction



1.	Thermostatic head with remote sensor
2.	Thermostatic mixing valve
3.	Soft sealing union fitting
4.	Soft sealing union fitting
5.	Union fitting
6.	Copper pipe for bypass
7.	Compression fitting
8.	Balancing lockshield valve

Flow Rate Diagram



 Curve	Kv	Kv Δt di 2°C	
1	4.70	0.36	Via A – AB
2	2.50	-	Via B – AB (always open)



Working Instructions



First case

- The mixing valve AB way must be connected to the end part of the pump;
- The A way must be connected to the manifold of the high temperature zone;
- The B way is the bypass;
- The probe of the thermostatic head must be inserted in the top part of the pump group before installing the Flow Mix.



Second case

- The mixing valve AB must be connected to the end part of the inlet manifold of the low temperature zone;
- The A way must be connected to the return manifold of the high temperature zone;
- The B way is the bypass;
- The probe of the thermostatic head must be inserted in the top part of the pump group.



How to install the fixed point thermostatic head:

- Remove the protection cap placed on the thermostatic valve.
- To ease the installation, set the thermostatic head to the maximum value and screw it onto the valve.
- After the installation, the set the head to the desired temperature.
- Place the bulb of the head into the fastening device.

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В Δ

To set the return flow rate from the bypass:

- Unscrew the ABS plug "A";
- Without forcing, use a 6 mm Allen key to close the obturator "C";
- Open the obturator for a number of turns as indicated on the flow rate diagram;
- Screw back the ABS plug "A" taking care of inserting the FASIT flat gasket "B" into it.

WARNING: Once the system has been leak tested, please relieve the pressure. A differential pressure over 1 bar between the inlet and the outlet of the valve may cause the sealing O-ring to be expelled.



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